Business Math
(02154)

Rationale Statement:
Focuses on the skills needed to solve mathematical problems, analyze and interpret data, and apply sound decision-making skills that relate to the business world.

Suggested Grade Level:
Grades 9-12

Topics Covered:
- **Taxation**
- **Savings and Investments**
- **Payroll and Human Resource Management**
- **Cash Management**
- **Financial Management**
- **Credit Management**
- **Purchase and Sales**
- **Inventory Records**
- **Depreciation, Cost Recovery, and Depletion**
- **Insurance**

Indicator #1: Apply basic mathematical operations to solve problems.	
Bloom's Taxonomy Level	**Standard and Examples**
Applying	**BMATH.1.1 Solve problems involving whole numbers, decimals, fractions, percents, ratios, averages, and proportions.** Examples: • Determine the correct mathematical process to use for various problems • Round numbers for estimation and other purposes • Define and use appropriate mathematical symbols for given problems • Use appropriate conversions when necessary
Applying	**BMATH.1.2 Use algebraic operations to solve problems.** Examples: • Solve algebraic equations for given problems • Solve for the unknown variable in an equation • Apply the order of operations principle
Applying	**BMATH.1.3 Use common international standards of measurement when solving problems.** Examples:

	• Identify and convert standard U.S. units of measurement • Calculate units of time • Identify currency measurements for countries other than the United States • Solve problems using various types of measurements
Analyzing	**BMATH.1.4 Analyze data using common statistical procedures.** Examples: • Construct, read, and interpret tables, charts, and graphs • Make inferences about data from tables, charts, and graphs • Use probability concepts to solve problems involving uncertainty
Indicator #2: Use mathematical procedures to analyze and solve business problems.	
Bloom's Taxonomy Level	**Standard and Examples**
Applying	**BMATH.2.1 Calculate different business tax scenarios.** Examples: • Calculate corporate income taxes • Calculate estate and other taxes
Applying	**BMATH.2.2 Calculate payroll and human resource problems.** Examples: • Calculate gross earnings with or without fringe benefits • Calculate payroll withholdings • Maintain a payroll register
Applying	**BMATH.2.3 Demonstrate knowledge of different financial management situations.** Examples: • Prepare an income statement • Prepare a balance sheet • Prepare a distribution of profit or loss statement • Calculate and apply appropriate business ratios
Applying	**BMATH.2.4 Demonstrate problem solving by applying mathematical principles to problems related to business purchases and sales.** Examples: • Calculate the total purchase price given the number of units and unit price • Calculate the total sales and the sales tax for a sales transaction

	• Calculate the dollar amount of cost, markup, or selling price when one of the three variables are unknown • Calculate the dollar amount of markdown, regular selling price, or reduced price when one of the three variables is unknown
Applying	**BMATH.2.5 Demonstrate problem solving by applying mathematical principles in the areas of inventory and depreciation.** Examples: • Calculating inventory valuation according to the different methods available • Calculate inventory turnover at cost and at retail for a given period • Calculate book values • Calculate the rate of depreciation • Calculate depletion and amortization costs
Indicator #3: Use mathematical procedures to solve individual and family financial issues.	
Bloom's Taxonomy Level	**Standard and Examples**
Applying	**BMATH.3.1 Calculate different personal tax scenarios.** Examples: • Compute personal federal and state income taxes • Calculate property tax, assessed value, or the tax rate when one of the three variables is unknown
Analyzing	**BMATH.3.2 Compare various methods of financial investments.** Examples: • Use charts to compare savings in passbooks, certificates, stocks, and bonds • Compare income from guaranteed yield investments and variable investments • Compare simple interest, compound interest, and annual percentage rates • Calculate the price of a bond, stock, or mutual fund given a recent quotation
Analyzing	**BMATH.3.3 Demonstrate knowledge of financial transactions by comparing the use of budgets, checking accounts, credit cards, and charge accounts.** Examples: • Calculate income and expenses for a given time period • Prepare a budget • Complete check records and reconcile the bank statement • Use the simple interest equation (I=PRT), solve for one of the variables and find maturity value, maturity date, and days between dates • Prepare a simplified amortization schedule
Analyzing	**BMATH.3.4 Demonstrate knowledge of selected insurance programs**

	through comparisons related to benefits. Examples: • Calculate benefits, claims, and premiums on real estate, health, disability, life, fire and auto insurance • Compare costs of insurance coverage with different options